

HARNESS, DICKEY & PIERCE, P.L.C.

ATTORNEYS AND COUNSELORS
P.O. BOX 828
BLOOMFIELD HILLS, MICHIGAN 48303
U.S.A.

A

12/04/97
JC530 U.S. PTO

Date: December 4, 1997

TELEPHONE
(248) 641-1600
TELEFACSIMILE
(248) 641-0270

Hon. Commissioner of Patents and Trademarks
Washington, D. C. 20231

Re: Inventor: **Floyd R. Dickson, Donald P. Chevalier and Mark Daley-Fell**
For: **LIGHT-TUBE RUNNING BOARD LIGHTING**
Atty. Docket No.: 7939000007

Sir:

Transmitted herewith for filing is the above referenced patent application.

1. 2 sheets of drawings showing Figures 1-2 are enclosed.
2. A Verified Statement Claiming Small Entity Status is enclosed.
- a. A check is enclosed to cover the fees as calculated below. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-0750. A duplicate copy of this document is enclosed.
- 3b. The fees calculated below will be paid within the time allotted for completion of the filing requirements.
- 3c. The fees calculated below are to be charged to Deposit Account No. 08-0750. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to said Deposit Account. A duplicate copy of this document is enclosed.

FILING FEE CALCULATION	Number		Number		Basic Fee
	Filed	Extra	Rate		
Total Claims	20	-	20	= 0	\$790.00
Independent Claims	3	-	3	= 0	\$82.00
Multiple Dependent Claim(s) Used				\$270.00	=
FILING FEE - NON-SMALL ENTITY					790.00
FILING FEE - SMALL ENTITY: Reduction by ½					
<input type="checkbox"/> Verified Statement enclosed.					395.00
<input type="checkbox"/> Verified Statement filed in priority application.					
Assignment Recordal Fee (\$40.00)					
37 C.F.R. §1.17(k) Fee (non-English application)					
TOTAL					\$395.00

Date: December 4, 1997

4. [] An Assignment of the invention is enclosed. The required cover sheet under 37 C.F.R. §3.11, §3.28 and §3.41 is attached.
5. [✓] An unsigned Declaration is enclosed. An executed Declaration will be filed in accordance with 37 C.F.R. 1.63.
6. [] **Foreign Priority:** Priority based on _____ Application No. ____, filed ____, is claimed.
7. [] A copy of the above referenced priority document [] is enclosed [] will be filed in due course, pursuant to 35 U.S.C. §119(a)-(d).
8. [] Because the enclosed application is in a non-English language, a verified English translation for examination purposes of same [] is enclosed [] will be filed as soon as it is available.
9. [] **Provisional Application Priority:** Priority based on United States Provisional Application No. _____, filed _____, is claimed under 35 U.S.C. §119(e).
10. [] A Preliminary Amendment is enclosed.
11. [] An Information Disclosure Statement, ____ sheets of PTO Form 1449, and patent(s)/publications/documents are enclosed.
12. [] An Establishment of Assignee's Right To Prosecute Application Under 37 C.F.R. § 3.73(b), and Power Of Attorney is enclosed.
13. [✓] An Express Mailing Certificate is enclosed.
14. [✓] Other Acknowledgment postcard

Attention is directed to the fact that the address of this firm has been designated as the correspondence address for this application.

Respectfully,


Michael J. Schmidt
Reg. No. 34,007

HARNESS, DICKEY & PIERCE, P.L.C.

ATTORNEYS AND COUNSELORS

P.O. BOX 828

BLOOMFIELD HILLS, MICHIGAN 48303

U.S.A.

TELEPHONE
(248) 641-1600

TELEFACSIMILE
(248) 641-0270

Date: December 4, 1997

Hon. Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

EXPRESS MAILING CERTIFICATE

Applicants: **Floyd R. Dickson, Donald P. Chevalier and Mark Daley-Fell**

Serial No. (if any):

For: **LIGHT-TUBE RUNNING BOARD LIGHTING**

Docket: 7939000007

Attorney: Michael J. Schmidt

"Express Mail" Mailing Label Number **EH 293 847 896 US**

Date of Deposit **December 4, 1997**

I hereby certify and verify that this Express Mail Certificate (label no. **EH 293 847 896 US**), patent application transmittal (in duplicate), 10 pgs. patent application with unexecuted declaration, 2 pgs. drawings showing FIGS. 1-2, and postcard are being deposited with the United States Postal Service "Express Mail Post Office To Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.


JoAnne Crum

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TITLE: LIGHT-TUBE RUNNING BOARD LIGHTING

INVENTORS:

Floyd Dickson
Don Chevalier
Mark Daley-Fell

LIGHT-TUBE RUNNING BOARD LIGHTING

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

The present invention relates to lights for a running board of a vehicle and, more particularly, to a light tube for directly and uniformly lighting a stepping surface of the running board and a ground surface below the running board.

5

BACKGROUND AND SUMMARY OF THE INVENTION

Vehicle running boards customarily provide an intermediate step to aid in the entry or exit of the vehicle. These running boards typically extend from the rear of the front wheel well to either the end of the front doors or to the front of the rear wheel well. An example of such a running board can be seen in U.S. Patent No. 10 5,382,035.

10

Lighting assemblies for illuminating vehicle running boards have previously been associated with running boards for both decorative and safety purposes. 15 Typically, such lighting assemblies employ standard incandescent bulbs and lenses to illuminate the running board from either end of the running board. This method causes increased glare to be cast upon the running board, and also causes light to shine in the user's eyes.

15

Another example of a typical lighting assembly employs a strip of small 20 incandescent bulbs to cast light upon the running board. However, this method does

not allow for easy replacement of expired bulbs, nor does it provide for both ground lighting and step lighting from a single light source.

It is therefore desirable to provide a single lighting assembly capable of lighting a stepping surface of a running board, in addition to a ground surface below the running board. It is further desirable to provide a lighting assembly capable of lighting the stepping surface of the running board while minimizing glare and stray light, which may enter the eyes of the user.

According to the preferred embodiment of the present invention, a running board light assembly is provided having a light source emitting light into a light tube extending along the length of a running board. This method allows the light from the light tube to be cast directly and uniformly upon the stepping surface of the running board to improve safety and aesthetics. The light from the light tube may also be cast upon the ground below the running board by simply bending the end of the light tube downward or by tapping into the light source.

Further areas of applicability of the present invention will become apparent from the detailed description provided hereinafter. It should be understood however that the detailed description and specific examples, while indicating the preferred embodiment of the invention, are intended for purposes of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become more fully understood from the detailed description and the accompanying drawings, wherein:

Figure 1 is a perspective view of the lighting assembly of the present invention attached to a running board of a vehicle.

Figure 2 is a partial cross-sectional view taken along line 2-2 of Figure 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following description of the preferred embodiments is merely exemplary in nature and is in no way intended to limit the invention, its application, or uses.

Referring to Figure 1, a running board light assembly **10** in accordance with the teachings of the present invention is shown attached to a running board **12** of a vehicle **14**. Running board light assembly **10** is adaptable to be attached to a variety of different vehicles including trucks and vans, among others. Running board light assembly **10** is designed to extend longitudinally from generally the front of a front door **16** to either the end of front door **16** (two-door vehicles) or the rear of a rear door **18** (four-door vehicles). It is anticipated that running board light assembly **10** can extend the entire length of running board **12** or may be coupled with other lighting assemblies for varying aesthetic effects.

Still referring to Figure 1, running board light assembly **10** includes a light tube **20** and a light source **22**. Light tube **20** is preferably made of a hard acrylic material. However, soft acrylic and fiber-optic material have also been found to possess favorable qualities. As best seen in Figure 2, light tube **20** includes a

translucent or transparent outer portion **24** along its length. Translucent or transparent outer portion **24** allows light transmitted through light tube **20** by light source **22** to be directly and uniformly cast upon a stepping surface **26** of running board **12**.

5 It is anticipated that running board light assembly **10** may be fastened to running board **12** after running board **12** is attached to vehicle **14**. On the other hand, running board light assembly **10** may be integrated into the design and manufacture of running board **12** to provide an improved aesthetic value.

10 Light source **22** of running board light assembly **10** is preferably a single incandescent bulb disposed on an end of light tube **20**. However, other common light sources, such as light emitting diodes (LED) or halogen bulbs, may be used. Referring to Figures 1 and 2, light source **22** is installed in an end of light tube **20** such that light source **22** is in communication with an interior volume **28** of light tube **20**. Interior volume **28** carries the light and reflects it through translucent or transparent outer portion **24**.

15

Using this method, various advantages are realized. First, the transmitting of light through interior volume **28** allows the light to be more efficiently directed over stepping surface **26**. Therefore, only a single light source is required to illuminate an entire area of running board **12**. Second, the ground **30** beneath running board **12** may be illuminated by directing an end of light tube **20** downward, as shown in phantom as Option A in Figure 1. Similarly, light source **22** may be tapped to provide light along the ground **30** below running board **12**, as shown as Option B in Figures 1 (hidden) and 2 (in phantom). The lighting of the ground in this manner

allows for improved safety and aesthetic value. Third, the use of translucent or transparent outer portion **24** minimizes glare and directs light away from the eyes of the user, thereby allowing easier entry and exit of the vehicle. Fourth, the present invention allows a light source **22'** to be disposed in an end-cap **32**, as shown in phantom in Figure 1, or other feature of running board **12** to minimize the environmental effects on light source **22'**.

It is anticipated that running board light assembly **10** may be used in various applications, such as to illuminate rear bumper steps, trailer platforms, or similar stepping surfaces.

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.

CLAIMS

What is claimed is:

1. A lighting assembly for a running board of a vehicle, comprising:

5 at least one light tube extending along at least a portion of the running board; and

10 at least one light source for emitting light into said at least one light tube, whereby said at least one light tube directs said light directly and uniformly over a stepping surface of the running board.

- 15 2. The lighting assembly according to Claim 1 further comprising:

 an outer portion disposed in said at least one light tube for minimizing glare and directing said light away from the eyes of a user.

- 20 3. The lighting assembly according to Claim 2 wherein said outer portion

is translucent.

4. The lighting assembly according to Claim 2 wherein said outer portion

is transparent.

- 25 5. The lighting assembly according to Claim 1 wherein an end of said at least

one light tube is bent downward with respect to the vehicle for directing said light directly and uniformly over a ground surface below the vehicle.

6. The lighting assembly according to Claim 1 wherein said at least one light source is tapped into to direct a portion of said light directly and uniformly over a ground surface below the vehicle.

5 7. The lighting assembly according to Claim 1 wherein said at least one light source includes incandescent bulbs.

10 8. The lighting assembly according to Claim 1 wherein said at least one light source includes halogen bulbs.

15 9. The lighting assembly according to Claim 1 wherein said at least one light source includes light emitting diodes (LED).

10 10. The lighting assembly according to Claim 1 wherein said at least one light tube is a hard acrylic light tube.

15 11. The lighting assembly according to Claim 1 wherein said at least one light tube is a soft acrylic light tube.

20 12. The lighting assembly according to Claim 1 wherein said at least one light tube is a fiber-optic light tube.

13. A running board lighting assembly for a vehicle, comprising:

a running board;

at least one light tube extending along at least a portion of said running board; and

5 at least one light source for emitting light into said at least one light tube, whereby said at least one light tube directs said light directly and uniformly over a stepping surface of said running board.

14. The running board lighting assembly according to Claim 13 further comprising:

a translucent portion disposed in said at least one light tube for minimizing glare and directing said light away from the eyes of a user.

15. The running board lighting assembly according to Claim 13 further comprising:

at least one cavity within said running board for encapsulating said at least one light source, whereby said at least one cavity secures and protects said at least one light source.

16. The running board lighting assembly according to Claim 13 wherein an end of said at least one light tube is bent downward with respect to the vehicle for directing said light directly and uniformly over a ground surface below the vehicle.

17. The running board lighting assembly according to Claim 13 wherein said at least one light source is tapped into to direct a portion of said light directly and uniformly over a ground surface below the vehicle.

18. A running board lighting assembly for a vehicle, comprising:
a running board having at least one cavity;
at least one light tube extending along at least a portion of said running board;

an outer portion disposed in said at least one light tube; and
at least one light source for emitting light into said at least one light tube, said at least one light source being disposed in said at least one cavity of said running board, whereby said at least one light tube directs said light directly and uniformly over a stepping surface of said running board and a ground surface below said running board.

19. The lighting assembly according to Claim 18 wherein said outer portion is translucent.

20. The lighting assembly according to Claim 18 wherein said outer portion is transparent.

ABSTRACT OF THE DISCLOSURE

A running board light assembly is provided having a light source emitting light into a light tube extending along the length of a running board. The light tube casts light directly and uniformly upon a stepping surface of the running board and upon a ground surface below the running board, without directing excessive glare or light into the eyes of the user.

PCT/US2016/037550
US Provisional Application
No. 62/285,330
Priority
Date
05/05/2016

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

LIGHT-TUBE RUNNING BOARD LIGHTING

the specification of which (check one)

is attached hereto.

was filed on _____ as Application Serial No. _____ and
was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, section 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

PRIOR FOREIGN APPLICATION(S)

Priority Claim

(Number)	(Country)	(Day/Month/Year filed)	Yes	No
(Number)	(Country)	(Day/Month/Year filed)	Yes	No
(Number)	(Country)	(Day/Month/Year filed)	Yes	No

DECLARATION AND POWER OF ATTORNEY

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States Provisional application(s) listed below:

PRIOR PROVISIONAL APPLICATIONS

(application serial number)

(Month / Day / Year filed)

(application serial number)

(Month / Day / Year filed)

I hereby claim the benefit under Title 35, United States Code, section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status - patented, pending, abandoned

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint Michael J. Schmidt, Reg. No. 34,007, and each principal, attorney of counsel, associate and employee of Harness, Dickey & Pierce, P.L.C., who is a registered Patent Attorney, my attorney with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. I request the Patent and Trademark Office to direct all correspondence and telephone calls relative to this application to Harness, Dickey & Pierce, P.L.C., P. O. Box 828, Bloomfield Hills, Michigan 48303 (248) 641-1600.

DECLARATION AND POWER OF ATTORNEY

Full name of first inventor: Floyd R. Dickson

Inventor's signature: _____

Date: _____

Residence: 112 Hoodstown Shores Blvd., Huntsville, Ontario P1H 2K7 CANADA

Citizenship: Canadian

Post Office Address: same as above

Full name of second joint inventor: Donald P. Chevalier

Second Inventor's signature: _____

Date: _____

Residence: 23686 Hollweg, Armada, Michigan 48005 U.S.A.

Citizenship: Canadian

Post Office Address: same as above

Full name of third joint inventor: Mark Daley-Fell

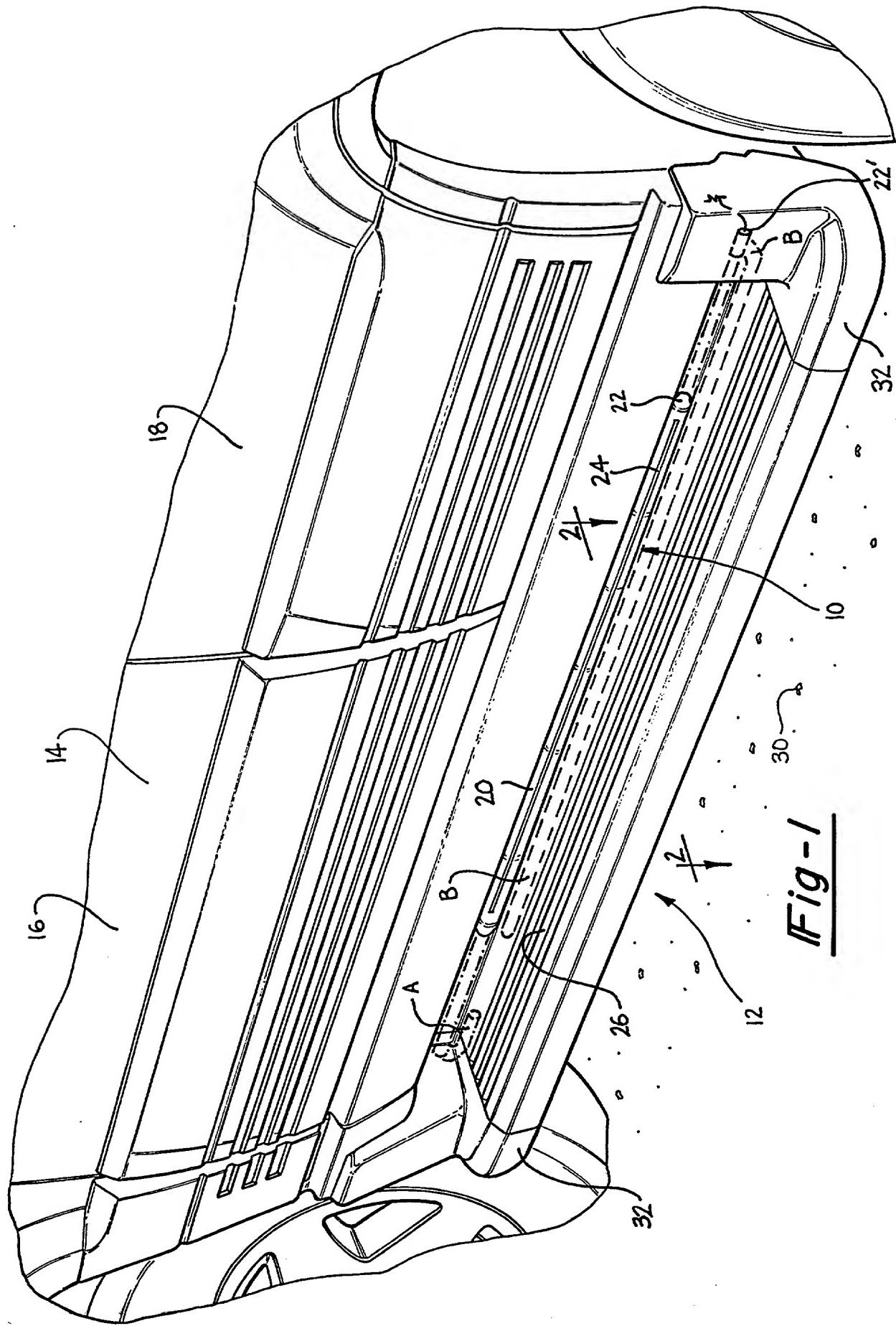
Third Inventor's signature: _____

Date: _____

Residence: R.R. 5, Orillia, Ontario L3V 6H5 CANADA

Citizenship: Canadian

Post Office Address: same as above



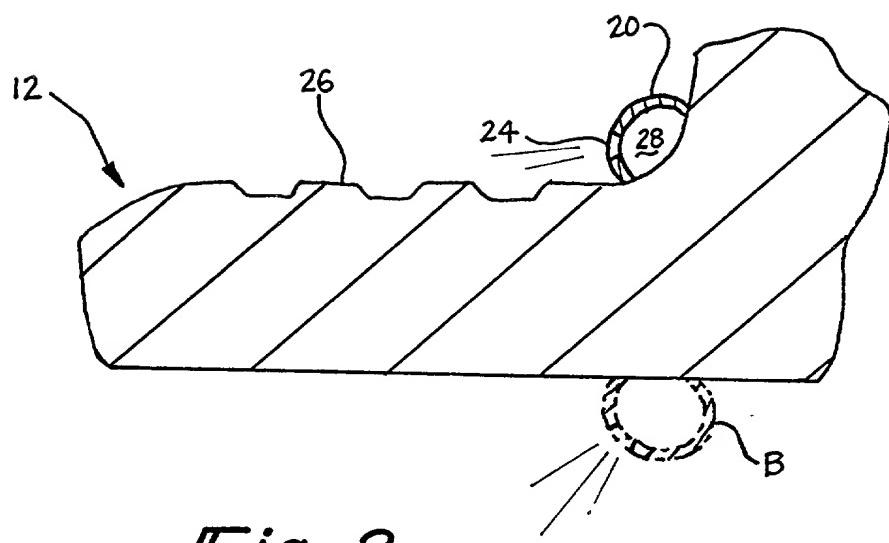


Fig-2